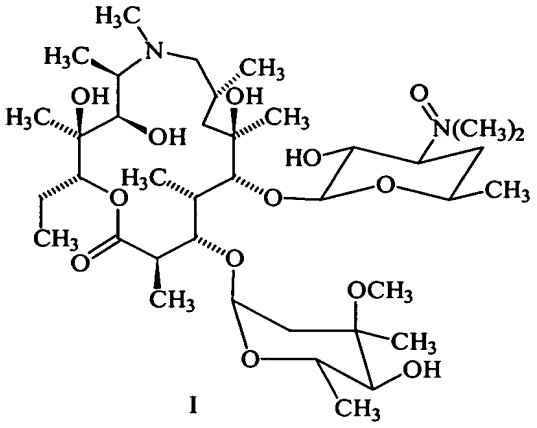
Claims

What is claimed is:

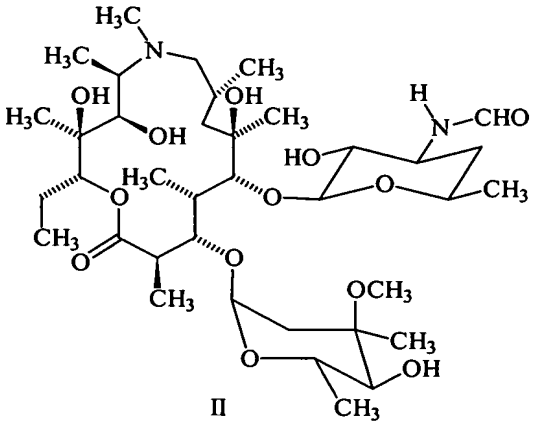
1. An azithromycin degradation product identified by an HPLC relative retention time of 0.22, 0.26, or 0.80.

2. An azithromycin degradation product identified by a HPLC relative retention time of 0.22 having substantially the following structure I:



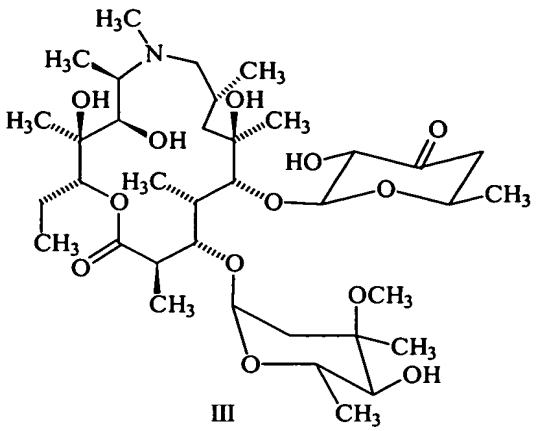
I

3. An azithromycin degradation product identified by a HPLC relative retention time of 0.26 having substantially the following structure II:



II

4. An azithromycin degradation product identified by a HPLC relative retention time of 0.80 and having the following structure III:



III

5. Azithromycin comprising less than about 0.5% by weight of at least one degradation product having a relative retention time on an HPLC relative to azithromycin of 0.22, 0.26, or 0.80.

6. The azithromycin according to claim 5, having less than about 0.3% by weight of at least one degradation product having a relative retention time on an HPLC relative to azithromycin of 0.22, 0.26, or 0.80.

7. A method to analyze azithromycin purity comprising:

assaying azithromycin using an HPLC to determine the presence of azithromycin degradation products;

identifying azithromycin degradation products; and

quantifying the azithromycin degradation products.

8. The method according to claim 7, wherein the identification step comprises searching and identifying on the HPLC spectrum azithromycin degradation products having a relative retention time of about 0.22, 0.26, and 0.80.

9. A method to determine azithromycin stability comprising:

assaying azithromycin using HPLC to determine the presence of azithromycin degradation products;

identifying the azithromycin degradation products; and

quantifying the azithromycin degradation products.

10. The method according to claim 9, wherein the identification step comprises searching and identifying on the HPLC spectrum azithromycin degradation products having a relative retention time of about 0.22, 0.26, and 0.80.

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